

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Claudiu Supuran et al.

Serial No. : 10/723,795

Group Art Unit: 1642

Filed : November 26, 2003

Examiner: Brandon J. Fetterolf

For : CA IX-Specific Inhibitors

AMENDMENT AFTER FINAL  
UNDER 37 CFR 1.116

MAIL STOP AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Amendment for the above-identified application is in response to the Final Office Action sent from the U.S. Patent and Trademark Office (PTO) on September 7, 2007 and is being made within the two month period from mailing of the Final Office Action. Applicants respectfully request that this Amendment After Final be entered in accordance with 37 CFR § 116(a) and with the Manual of Patent Examining Procedure (MPEP) §§ 714.12 and 714.13.

Applicants respectfully submit that the instant Amendment After Final does not raise any new issues and presents the rejected claims “in condition for allowance.” [MPEP § 714.12.] Detailed reasoning supporting the absence of any new issues and

the allowability of the claims as amended follows below after the Remarks section, which section shows support in the Specification for the claim amendments. Thus, Applicants respectfully request that this Amendment After Final be entered, and that the claims as amended be allowed.

### SUMMARY OF OCTOBER 17 INTERVIEW

Applicants would like to thank Examiner Fetterolf for granting a phone interview on Wednesday, October 17 at 1PM (EST). During that interview, Applicants discussed the proposed claim amendments that had been faxed to the Examiner by the Applicants, and how the amendments and an exemplary reference [Svastova et al., FEBS letters, 577: 439-445 (2004); copy attached] address the points in the remaining 112 1<sup>st</sup> ¶ rejection. Applicants discussed during the phone interview some of the arguments presented in the instant response to address that remaining 35 USC 112, ¶1 rejection.

In particular, Applicants respectfully submitted that one of skill in the art would expect that the larger, **labeled** CA IX-specific sulfonamide inhibitors would be even more selective for CA IX, as CA IX has a larger active site than the other carbonic anhydrase isozymes (CAs) studied. Evidence for the improved affinity of a representative inhibitor, Compound 5, for CA IX when that inhibitor was labeled over when it was unlabeled [that is, a lower inhibition constant  $K_1$  resulted from screening assay when Compound 5 was labeled with fluorescein isothiocyanate (FCIC) than when unlabeled] was provided in the form of an exemplary reference, also faxed to the

Examiner for the interview – that is, Svastova et al., FEBS Letters, 577: 439-445 (2004).

The Examiner responded that it was not evident from Svastova et al. (2004), id., that the labeled inhibitors having bulkier side-groups would favor the larger active site of CA IX over the other CAs. Applicants indicated that later experiments by the inventors showed that 1) labeled MN/CA IX-specific inhibitors, as represented by FITC-labeled sulfonamides, had better affinity for CA IX than the unlabeled sulfonamides; and 2) that such representative labeled MN/CA IX-specific inhibitors, that is, FITC-labeled sulfonamides, had improved affinity for CA IX versus the other CA isozymes tested. The Examiner indicated that such evidence should be submitted with the response to the final office action.

Applicants respectfully direct the Examiner's attention to the fact that the evidence requested by him during the subject interview is provided in the instant response. Applicants further respectfully point out that the instant claim amendments are the same as those faxed to the Examiner for the October 17 interview.